MODIS TECHNICAL TEAM MEETING

July 15, 1994

The MODIS Technical Team Meeting was chaired by Vince Salomonson. Present were Dick Weber, Peter Abel, David Herring, John Bauernschub, Joann Harnden, Bill Barnes, Bruce Guenther, Yoram Kaufman, Janine Harrison, and Ed Masuoka.

1.0 SCHEDULE OF EVENTS

July 15	**Semi-Annual Reports due to Barbara Conboy**
Sept. 20 - 22	SDST Simulation Data Workshop, Flathead Lake, MT
Oct. 18	Calibration Working Group, Greenbelt Marriott
Oct. 19 - 21	MODIS Science Team Meeting, Greenbelt Marriott

2.0 MINUTES OF THE MEETING

2.1 Delivery of Level 1B Algorithms

Salomonson asked for an update on the status of the MODIS Level 1B Algorithms. Guenther reported that the Level 1B algorithm will be completed on schedule.

2.2 Budget Report

Salomonson led a discussion on the request by Dick Weber and the MTPE Office (Code 170) for detailed budget information for the MODIS Science Team through the year 2000. Harrison reported that she completed the SCF budget spreadsheet for the team. Harrison used information from SDST's MODIS SCF Plan and the Team Member's original proposals in order to complete the exercise. Information on the Team as a whole will be given to Weber and Code 170. If more detailed information at the individual Team Member level is requested by Weber and Code 170, then the Team Members will need to become involved. Harrison stated that the SCI budget requires even more detailed information and will therefore take at least another week to complete. SCI information for the Team as a whole is being compiled by using information from the Team Member's original cost proposals.

There was some question as to the utility of this budget exercise. It is difficult to plan specifically what computers will be bought later this decade because computer processing speed and storage capacity continue to improve, whereas cost is decreasing. Discussion centered around the magnitude of this budgeting exercise versus the amount of information actually needed by Weber and Code 170. Salomonson is concerned about the increasing level of reporting being required. Salomonson is also not in favor of having to further burden the MODIS Team Members for very detailed questions in these budget exercises

unless it is absolutely necessary. Salomonson asked Weber to convey his concerns to Code 170.

2.3 MODIS Project Reports

Weber reported that Hughes is considering a corporate reorganization, which may mean that some of their facilities will be combined with others. There is a possibility that SBRC will be affected.

Weber announced that SBRC's work on the MGBC (MODIS Ground-based Calibrator) has been suspended. Also, he noted, SBRC is replacing their estimates with actual measurements of MODIS' weight. MODIS weighs 9.8 kilograms less than previously estimated.

2.4 MCST Reports

Guenther announced that MCST will form a MODIS Instrument Operations and Data Information Team, which he will head. Guenther will appoint two other people to assist him with the management of the team.

Abel announced that next week there will be a freeze on the overall design of Beta 2 software. He reported that work is ongoing on individual Level 1B software modules.

Guenther stated that MCST is looking for ways to provide a definitive approach for dealing with the light scattering problem in MODIS at launch. During the Spring 1995 MODIS Science Team Meeting Plenary Session, MCST will present its solutions to MODIS' scattering, ghosting, and crosstalk problems. Guenther said MCST will provide information on these problems to the Science Team so that they can work with MCST on making any necessary corrections. MCST will submit a strawman proposal at the Spring 1995 Meeting to guide the Team from the development of the PGS through the launch of EOS AM-1.

2.5 SDST Reports

Masuoka announced that the Geolocation ATBD has been completed and is being reviewed internally. In the course of preparing the ATBD, SDST came across a problem in the MODIS instrument design with regard to registration of the 250-, 500-, and 1,000-m bands.

Masuoka reported the EROS Data Center (EDC) has submitted a proposal to ARPA (Advanced Research Projects Agency) to connect the Data Center with the Laboratory for Terrestrial Physics Computing Facility and the MODIS Team Leader Computing Facility (TLCF). It appears that this proposal will be approved in the next several weeks. Masuoka is working with the Data Flow Technology Branch, NASA Science Internet, and the EOSDIS Version 0 network group to determine what will be needed to connect the TLCF to the ATM (Asynchronous Transfer Mode) network at GSFC and in turn to a high speed, 45

Mbps connection to EDC. At present it appears that a dedicated Sun workstation will be required, but other costs to MODIS will be minimal.

2.6 MODIS Filter Status

Barnes announced that while assembling the filters for the MODIS protoflight model, SBRC found that some (Bands 9 and 11) do not meet spec. (See the July 7, 1994 Technical Team Minutes for details.) Barnes showed a viewgraph on the "unofficial filter status" (Attachment 1). Barnes reported that after conferring with Ed Knight, Howard Gordon, and John Barker, he sent a memos to SBRC stating that the performance of Bands 9 and 11 are acceptable.

Barnes reported that an error in timing recently noticed by members of SDST will cause the registration of bands with different IFOVs to be off by 1/2 pixel (i.e., the 500s will be misregistered to the 1,000s by 0.5 pixel). Unfortunately, discussions with Tom Pagano, SBRC, have indicated that the timing is set internal to the large readout chip on the FPAs. All of these chips for the three flight models of MODIS have been delivered and the supplier is closing its plant in the next 30 days. Therefore, it appears that although bands of the same size will be registered to themselves to within 0.2 pixels, bands of different size will be misregistered by as much as 0.5 pixels. Any data product impacts should be reported to Salomonson.

2.7 Upcoming SCAR Campaign

Kaufman reported that he has been analyzing data from the SCAR-A campaign and building dynamic aerosol models from those data. He stated that plans for the upcoming SCAR-C campaign—to take place in California and Oregon—are proceeding.

2.8 MAST Reports

Herring announced that the MODIS Science Team Minutes have been completed. The complete set of minutes and attachments are available electronically in MODARCH. Hardcopy will only be distributed upon request.

3.0 ACTION ITEMS

3.1 Action Items Carried Forward

1. *Barnes:* At Salomonson's request, explore the possibility of EMI effects on MODIS data as a result of direct continuous broadcast.
2. *Fleig & Herring*: Review the MODIS brochure and recommend changes/alternatives [Ongoing—the first draft is complete and being reviewed].
3. *Barnes*: Investigate the procedure for redesignation of channels for night data return (to Kaufman). [Barnes has determined that MODIS channels can be redesignated for night data return; however, this AI is still open.]
4. *Fleig and Ungar*: Interact with the group leaders prior to developing a MODIS data simulation plan for review at the next Science Team Meeting, due July 4.

5. *Masuoka*: Provide Gordon's Water Leaving Radiance software to ESDIS project as a test case for the utility of massively parallel processing after a beta delivery is received from the Oceans Team. [SDST is waiting for delivery of the Ocean Group's beta software.]

4.0 ATTACHMENTS

NOTE: All attachments referenced below are maintained in MODARCH and are available for distribution upon request. Please contact Janine Harrison, MAST Technical Manager, at (301) 286-5324, Code 920, NASA/Goddard Space Flight Center, Greenbelt, MD 20771 if you desire copies of any attachments.

1. "Unofficial Filter Status," by Edward Knight
2. "Shift Sensitivity Band 9," by Edward Knight
3. "Band 9 July 1994," by Edward Knight